

RESTORING NATURAL CAVE DRAINAGE FY2003 REPORT

Timpanogos Cave National Monument

Summary

A lighted, paved trail allowing over 80,000 people/year to tour Timpanogos Cave has significantly modified the natural drainage of water through the cave. Where the drainages cross the cave trail, the visitors' feet spread the mud coating the surrounding formations and discoloring the cave's pure water supplies. This introduced mud causes the formations to lose their astounding color, it decreases the water quality, and it provides food sources to sustain non-cave adapted species. The natural processes can be restored by minimizing the cave trail's interaction with the water flow paths and creating maintainable catchments to keep the imported debris from escaping the trail.



Disturbed Drainage - Middle Cave Lake

Progress

This year focused its efforts on Middle Cave Lake Catwalk and Hansen Cave Catwalk. Both of these catwalks had PVC catchments added. These catchments should greatly reduce the introduction of foreign debris and allow for easy maintenance.



PVC Catchments



Removing introduced sediments

The intense restoration efforts of Middle Cave Lake were started. Over 50, 5-gallon buckets of trail debris were removed from the Lake. With catchments now in place, the no further accumulation of debris will occur making the cleaning a long term change.

Water chemistry and DNA analysis were performed to identify the effects of the disturbed cave drainages. Water samples were taking from 10 sites throughout the cave. About half of the sites were taken from “disturbed” areas and half from “pristine” areas. These samples are being analyzed for microbes and general water characteristics. The study will show how the cave’s water quality is affected by its interaction with the trail. The results will be used to create target parameters for restoring the cave’s drainages.

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